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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/649,567	08/27/2003	Frank D. Garber	0103-0036 (ZM0521)	5973
43231	7590	10/04/2005	EXAMINER	
ZIMMER TECHNOLOGY - REEVES			REIMERS, ANNETTE R	
P. O. BOX 1268			ART UNIT	
ALEDO, TX 76008			PAPER NUMBER	

3732

DATE MAILED: 10/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/649,567

Applicant(s)

GARBER ET AL.

Examiner

Annette R. Reimers

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 July 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) 3-6, 8-11, 18 and 19 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 7, 12-17 and 20-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 August 2003 and 11 July 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>09/16/05</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Allowable Subject Matter

The indicated allowability of claim 17 is withdrawn in view of the newly discovered reference to Mallory et al. Rejections based on the newly cited reference follow.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-2, 7, 12-14, 16 and 20-22 are rejected under 35 U.S.C. 102(b) as being anticipated by Noiles (U.S. Patent Number 3,848,272).

Noiles discloses an acetabular cup, 10, having a liner, 162, including a hemispherical back, a shell including a hemispherical cavity for receiving the convex back, and a means for retaining the liner in the shell including a spherical profile thread spiraling around a portion of each of the shell and liner (see figure 21 and column 8 lines 38-43). The liner includes a liner screw thread, 164, having a spherical profile thread crest and a spherical profile thread root, the liner thread root is coincident with the hemispherical convex back, and the liner thread crest projects beyond the hemispherical convex back and follows a spherical profile spaced from the spherical convex back (see figure 21). The shell includes a shell screw thread, 160, where thread

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crest has a corresponding spherical profile, and a shell thread root, having a spherical profile for receiving the liner thread crest (see figure 21).

Noiles further discloses an acetabular cup assembly and method, a hip prosthesis system, and a method of attaching an acetabular liner to an acetabular shell including an acetabular liner having a hemispherical body with a face on one side of the body and a convex back side opposite the face, the back side having a polar region, a concave bearing surface extending into the body through the face toward the polar region, the back side including a liner screw thread having a liner thread root and a liner thread crest spiraling around the back side (see figure 21) and an acetabular shell including a concave mating surface including a shell screw thread engageable with the liner screw thread (see figure 21).

In addition, the acetabular cup assembly has a self-locking arrangement (see column 8 lines 43-46 and 58-60). Furthermore the hip prosthesis system includes a femoral prosthesis including a stem portion and a head portion, the head portion being engageable with the concave bearing surface of the acetabular liner (see figure 1 and column 3 lines 30-32).

Claims 1-2, 7, 12-14, 16 and 20-22 are rejected under 35 U.S.C. 102(b) as being anticipated by English (U.S. Patent Number 4,004,300).

English discloses an acetabular cup having a liner, 14 including a hemispherical back, a shell, 16, including a hemispherical cavity for receiving the convex back and a means for retaining the liner in the shell including a spherical profile thread spiraling around a portion of each of the shell and liner (see figures 1 and 3 and column 4 lines

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51-53). The liner includes a liner screw thread, 32, having a spherical profile thread crest and a spherical profile thread root, the liner thread root is coincident with the hemispherical convex back, and the liner thread crest projects beyond the hemispherical convex back and follows a spherical profile spaced from the spherical convex back (see figure 3). The shell includes a shell screw thread, 37, where thread crest has a corresponding spherical profile, and a shell thread root, having a spherical profile for receiving the liner thread crest (see figure 3).

English further discloses an acetabular cup assembly and method, a hip prosthesis system, and a method of attaching an acetabular liner to an acetabular shell including an acetabular liner having a hemispherical body with a face on one side of the body and a convex back side opposite the face, the back side having a polar region, a concave bearing surface extending into the body through the face toward the polar region, the back side including a liner screw thread having a liner thread root and a liner thread crest spiraling around the back side (see figure 3), and an acetabular shell including a concave mating surface including a shell screw thread engageable with the liner screw thread (see figure 3).

In addition, the acetabular cup assembly has a self-locking arrangement (see column 4 lines 51-53). Furthermore the hip prosthesis system includes a femoral prosthesis including a stem portion and a head portion, the head portion being engageable with the concave bearing surface of the acetabular liner (see figure 1 and column 4 lines 38-43).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Noiles (U.S. Patent Number 3,848,272) in view of Park (U.S. Patent 4,491,987). Noiles discloses the claimed invention except for the hip prosthesis system including bone cement positionable between the shell and acetabulum. Park discloses a device comprising bone cement positionable between the shell and acetabulum (see figure 1). Park teaches that bone cement provides a mechanism of attachment of the prosthesis to the bone (see column 4 lines 11-12 and 55-57). It would have been obvious to one skilled in the art at the time the invention was made to construct the device of Noiles with bone cement positionable between the shell and acetabulum in view of Park, in order to provide a mechanism of attachment between the shell and the acetabulum.

Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over English (U.S. Patent Number 4,004,300) in view of Park (U.S. Patent 4,491,987). English discloses the claimed invention except for the hip prosthesis system including bone cement positionable between the shell and acetabulum. Park discloses a device comprising bone cement positionable between the shell and acetabulum (see figure 1). Park teaches that bone cement provides a mechanism of attachment of the prosthesis to the bone (see column 4 lines 11-12 and 55-57). It would have been obvious to one

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skilled in the art at the time the invention was made to construct the device of English with bone cement positionable between the shell and acetabulum in view of Park, in order to provide a mechanism of attachment between the shell and the acetabulum.

Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Noiles (U.S. Patent Number 3,848,272) in view of Mallory et al. (U.S. Patent 4,883,491). Noiles discloses the claimed invention except the liner thread crest and the shell thread root each being formed by programming a computer controlled machine tool. Mallory et al. discloses an acetabular cup assembly and teaches formation of spherical threads using a computer controlled machine tool (see column 3, lines 55-58). It would have been obvious to one skilled in the art at the time the invention was made to construct the device of Noiles with the liner thread crest and the shell thread root each being formed by programming a computer controlled machine tool, in view of Mallory et al., in order to use a computer tool to guide a cutter to follow a spherical profile in the formation of the liner and shell threads.

Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over English (U.S. Patent Number 4,004,300) in view of Mallory et al. (U.S. Patent 4,883,491). English discloses the claimed invention except the liner thread crest and the shell thread root each being formed by programming a computer controlled machine tool. Mallory et al. discloses an acetabular cup assembly and teaches formation of spherical threads using a computer controlled machine tool (see column 3, lines 55-58). It would have been obvious to one skilled in the art at the time the invention was made to construct the device of English with the liner thread crest and the shell thread root each

being formed by programming a computer controlled machine tool, in view of Mallory et al., in order to use a computer tool to guide a cutter to follow a spherical profile in the formation of the liner and shell threads.

Response to Arguments

Applicant's arguments filed July 11, 2005 have been fully considered but they are not persuasive. In response to applicant's argument that the Noiles and English references are not directed to a "spherical profile thread spiraling around a portion of each of the shell cavity and liner convex back" or a "self-locking arrangement in which a portion of the shell thread profile differs in a dimension from a corresponding portion of the liner thread profile such that upon screwing of the liner into the shell the portions interfere with one another", it is noted that the law of anticipation does not require that the reference "teach" what the subject patent teaches, but rather it is only necessary that the claims under attack "read on" something in the reference. *Kalman v. Kimberly Clark Corp.*, 218 USPQ 781 (CCPA 1983). Furthermore, the manner in which a device is intended to be employed does not differentiate the claimed apparatus from prior art apparatus satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ 2d 1647 (1987).

Furthermore, examiner respectfully disagrees with applicant regarding the Noiles reference teaching the use of cylindrical threads. Noiles thread is formed on an "integral threaded ring portion" (see column 8, lines 41-42). Noiles fails to teach a cylindrical thread formed on a raised cylindrical ring adjacent the equator of the insert. Regarding the English reference, simply because English teaches a cylindrical portion, 19, bending

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into a hemispherical end, 20, does not mean that the threads are cylindrical and not spherical. English does not teach that the threads are definitively cylindrical.

Moreover, applicant does not clearly define "a spherical thread profile" in the specification. Thus, the claims have been given their broadest interpretation. During examination, the claims must be interpreted as broadly as their terms reasonably allow. This means that the words of the claim must be given their plain meaning unless applicant has a clear definition in the specification. In re Zletz, 13 USPQ 2d 1320, 1322 (Fed. Cir. 1989).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See attached PTO 892 and PTO 892 mailed on April 6, 2005 for art cited of interest.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Annette R. Reimers whose telephone number is (571) 272-7135. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eduardo Robert can be reached on (571) 272-4719. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

AR

AK



EDUARDO C. ROBERT
PRIMARY EXAMINER